



## The ILLINOIS ENGINEER

ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS  
INCORPORATED

Affiliated with the National Society of Professional Engineers  
614 East Green Street

Champaign, Illinois



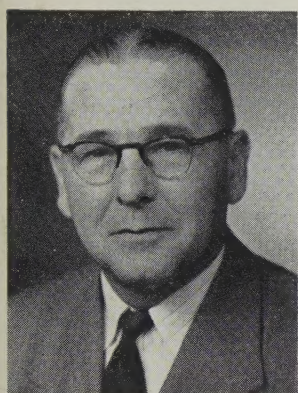
VOLUME XXXI, NO. 9

SUMMER ISSUE

SEPTEMBER, 1955

### PRESIDENT'S MESSAGE

Three years ago this month the motion was made at a Board of Direction meeting in Chicago to set up a committee to investigate lack of progress in the Illinois Society. The Constitutional amendment changes proposed



PRESIDENT WALLACE

on the ballot which the corporate members voted, decided the questions on that issue. The polls closed on August 27; the Tellers Committee counted the ballots on August 29. Six hundred and sixty-three ballot envelopes were received. Of this number, 22 were not identified on the cover and were therefore not counted, leaving a net of 641 ballots validated. The vote on the five proposals is as follows:

PROPOSAL 1—All officers and members of Board of Direction to be elected by letter ballot. 549 yes; 83 no.

PROPOSAL 2—Term of office for Board. 565 yes; 63 no.

PROPOSAL 3—Annual dues increase to I.S.P.E. of \$5.00. 345 yes; 296 no. The Constitution requires a two-thirds affirmative vote of the total vote cast to approve the adoption. Do not look for your slide rule, the dues increase did not pass.

PROPOSAL 4—Reapportionment of Chapter Representatives. 538 yes; 90 no.

PROPOSAL 5—Change in the time from two years to 18 months for delinquent dues. 537 yes; 94 no.

I wish to personally thank every member who exercised his duty by voting. The response indicates a keen interest in the affairs and further growth of the Society.

The increase in dues has been a very controversial subject, "loss of members" . . . "more money to operate" . . . "The Society needs this, etc." . . . "What will we get for our \$5.00?"

However, I am certain that we do need MORE members, and I also know that MORE members will provide MORE dollars. If 50% of the members voting "no" on the increase of dues would only secure a new member, we would have MORE members and MORE dollars.

What do you say, fellow Professional Engineers, let's get behind the wheel and really give a big SHOVE, and make the Society "SHAKE, RATTLE AND ROLL." Thanks.

DWAIN M. WALLACE, President

### PROFESSIONAL ENGINEERING CERTIFICATE PRESENTATION

By P. E. ROBERTS, *Executive Secretary*

A special meeting of the Chicago Chapter was held on Tuesday, August 16, for the purpose of presenting the registration certificates to those in the Chicago area who passed the May professional engineer examination. This was a noteworthy meeting in several respects. It was the first time a presentation of this kind has been done in Illinois. Invitations were sent to 125 in the Chicago area and 110 new professional engineers sat down to dinner as the guests of the Chicago Chapter.

Chicago Chapter President Harold Sommerschield introduced the following five of the nine members of the professional engineers examining committee: Dr. Edwin Whitehead, Dr. George Thodos, Mr. Melvin Amstutz, Mr. F. H. Lane, and Mr. Jay C. Marshall. Also introduced were Mrs. Bernice T. Van Der Vries, Winnetka, State Representative, 7th District; D. K. Chinland, Vice President, Illinois Engineering Council; T. M. Niles, President, Illinois Section American Society of Civil Engineers; R. B. Gear, American Institute of Electrical Engineers; James N. Wognum, American Society of Mechanical Engineers; E. J. Wolfe, President, Chicago Association of Consulting Engineers; Mary L. Murphy, Society of Women Engineers; George L. Jackson, Vice President, Western Society of Engineers; Alois Graf, Vice President Chicago Chapter ISPE; John Duba, Secretary-Treasurer, Chicago Chapter ISPE; Linas Brown, Program Chairman, Chicago Chapter ISPE; and P. E. Roberts, Executive Secretary, ISPE.

Director Vera M. Binks, Department of Registration and Education, addressed those in attendance with appropriate remarks about engineering and registration. The engineers in groups, that is, civil, mechanical, electrical, etc., were presented to Miss Binks, who greeted each and handed him his certificate.

Much has been written and said about unity in the engineering profession. Seldom has a better demonstration been given that unity can be practiced as well as

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discussed than that given at this meeting. All barriers were leveled and the newly registered engineers and long-established successful engineers sat down to eat and talk together. When engineers realize that they have identical problems which can be solved by cooperative effort, then unity will become an accomplished fact. Vast differences in technology, divergent opinions on politics, and wide differences in the practice of engineering, that is, educational, industrial, consulting and government, will become secondary to a real interest in professional and economic improvement—then unity will be easily attained.

From every point of view, this certificate presentation meeting was a success and one which will be long remembered. Credit for a job well done goes to Chicago Chapter President Sommerschild, Secretary-Treasurer John Duba, and Program Chairman Linas Brown.

### CONSTITUTIONAL AMENDMENT BALLOT COUNT

On July 19th, 1,478 ballots were mailed to the corporate members of the Illinois Society. Five proposals were decided by this vote, namely; (1) That the members of the Board of Direction who in the past have been elected by the Board, be elected by the corporate members; (2) That the term of the office of the Chairman of the Illinois Engineering Council Representatives be made three years and coincide with the fiscal year of the Council; (3) That the dues of corporate members be increased \$5.00 per year; (4) That an additional Chapter Representative be given Chapters whose corporate membership is over 100 and that an additional Chapter Representative be added for each increment of 200 corporate members over 100; (5) That members be dropped for non-payment of dues at 18 months instead of two years. The Illinois Society Constitution in Article XII reads "... An amendment shall be declared adopted if the affirmative votes represents two-thirds of the total vote cast, not less than 50 members voting."

The Executive Committee declared that proposals 1, 2, 4 and 5 be adopted and that the amendments be written into the Illinois Society Constitution, the revised Constitution be duplicated and be delivered to the members of the Board of Direction at their next meeting.

The tally as counted by the Tellers Committee appointed by President Wallace is as follows:

Proposal No. 1	Yes 549	No 83
Proposal No. 2	Yes 565	No 63
Proposal No. 3	Yes 345	No 296
Proposal No. 4	Yes 538	No 90
Proposal No. 5	Yes 537	No 94
Total ballots received	663	
Total ballots validated	641	
Total ballots not validated	22	

Members of the Tellers Committee, Mack Kinch, Chairman; Gordon Carlson, J. Ray Carroll, C. Dale Greffe, Edward Healy, and W. J. Roberts.

## Obituary

Hugh J. Fixmer, (S '08), Life Member of the Society, died in Oak Park on August 15th. Mr. Fixmer was President of the Illinois Society in 1932 after having served a year as Vice President. In 1937 he served a term as Vice President of NSPE directly after Mr. Babbitt's term. He served on various other committees in the Society. Mr. Fixmer went to work for the City of Chicago in 1905 and was an employee for a little over fifty years. He retired on June 30th this year.

Mr. Fixmer was born in Springfield, Illinois on November 12, 1880. Of his fifty years of service with the City of Chicago, thirty years were spent in the Board of Local Improvements and the last fifteen in the Bureau of Streets. He is survived by his widow, Rosa; two sons, Eugene T. and Hubert V., and a daughter, Mrs. Rosamond F. Stanger.

### COST OF LIVING INDEX

The cost of living correction factor to be applied to the I. S. P. E. Schedule of Minimum Fees and Salaries is based upon the Consumer Price Index of the 1947-49 average as determined by the Bureau of Labor Statistics. On the 1947-49 base the correction factor for July, 1955, is 114.7.

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# Professor Babbitt, Our Brazilian Correspondent, Likes His Assignment



SECRETARY EMERITUS BABBITT

Rio de Janeiro, Brazil  
August 18, 1955

Dear Skeet,

Here's the letter I promised to you, containing a brief report on experiences and observations in Brazil. First let it be understood that generalizations are dangerous unless he who generalizes is an authority. An authority is a tourist who has been in a country no longer than five weeks. That time is required to learn enough to know that he knows too little. As time passes he learns more and more to break down his prejudices. I'm on the down side of learning, having passed the 5-week period by about five weeks. At this stage of my progress I'm not afraid to say, to generalize, that all (well, most all) Brazilians speak Portuguese and many speak English or French or other foreign languages. They are more language-conscious than we, it is considered the mark of an educated man to speak more than one language, and the pre-war European influence of culture is still evident. This personal, cultural charm adds to the natural beauty and charm of the country. Brazil is so large, larger than continental U.S.A., that it has extremes of climate, of culture, of economic conditions, and of the beauties of nature.

It might be safe for me to generalize on our own organization. I'm employed with the U.S. Operations Mission which was, until recently, under the Foreign Operations Administration. On the first of July it became the International Cooperation Administration (I. C. A.) and it is now under the State Department, but it is not in the diplomatic service. Within the organization are

many "parties" or "services." Some of these, known as Services, are operated, administered, and paid for jointly by Brazil and by the U.S.A. One of these, to which I am attached, is known as SESP (Servicio Especial de Saudi Public meaning Special Public Health Service). You may recall the story of the socially conscious sewage-treatment plant operator who boasted that he had connections with all of the best people. Well SESP has administrative connections with about everyone. We are part of the Point Four program; we belong to the Institute of Inter-American Affairs; and we are admitted to the presence of the Ministry of Health and of the Ministry of Education. It is thrilling and inspiring to see how well these organizations work together when SESP has a problem to solve.

It's a fine organization to work with, not alone because of what it does, but because of its fine personnel. They are tops, both Brazilians and Americans. Tact and the ability to make friends and to influence people were considered in their selection. That may explain to some extent, why they get along so well with each other. We're here to make the job go and anything that we do, good or bad, reflects on our country. Maybe our principal mission is to reflect only the good but in doing so there is an opportunity for each to accomplish his own special mission.

My official title is Sanitary Engineering Educational Consultant. My duties take me to the engineering schools of the country on frequent visits. It is now easy for me to appreciate the plight of a traveling salesman, a peddler, or a book agent. As might be expected the schools are widely separated from Belem on the Amazon, not far from the equator, to Porto Alegre, not far from Uruguay, on the 30th parallel of latitude and south of the Tropic of Capricorn. To make the circuit of the schools will keep Mrs. Babbitt and me on the road for more than half of our time. Fortunately for me she goes along on the trips and, if there is time over a week-end, we can enjoy a side trip together now and then, to see things not otherwise encountered in line of duty.

Our frequent travels have influenced our manner of living. Instead of taking an apartment in Rio, the common thing for our people to do, we are living in a hotel where our principal problem is to pay the bill. The hotel is located on the famous Copacabana Beach. This more nearly attains its advertised attractions than is attained by the equally famous Waikiki Beach in Hawaii, which is a disappointment to almost every tourist who goes there. Much to my pleasure Copacabana fails to reach the heights of night club and night life activity mentioned in song and story. If the wild life that should accompany night clubs exists here I've not seen it. It's too well covered for my innocent and unsophisticated eyes.



Travel here is confined almost exclusively to the air. I know Skeet will approve of my enthusiasm for that mode of travel and for my growing knowledge of air planes. At the start, I could, with commendable ease, distinguish between a 2-engined and a 4-engined plane, and soon gave up looking for a 3-engined job. Now I speak with confidence concerning the relative advantages of travel on strato-cruisers, constellations, DC-6's, and PBV's. If the ride's to be on a constellation I expect to be comfortable. All-night journeys are too much in style. The other night we flew from Belem to Recife in 10 hours, leaving at 9 p.m. and making 8 stops en route. It's known as the "milk run" or the "grasshopper" route.

Automobile travel, within or without the cities, is unattractive to me. Outside because of long distances on dirt roads, and inside of Rio because of traffic conditions. In other cities it does not seem quite so bad as it is in Rio. Restraint must be exercised in discussing Rio's traffic conditions. My point of view can be indicated by confessing that I have regretfully put my car into almost complete "dead" storage. Public transportation is more attractive. Imagine the feeling of frustration when, upon being run into and ruining a fender you couldn't bawl the guy out proper. What kind of an epithet is "nao fala Portuguese?"

Climate and the location of the sun continue to confuse. The seasons and the sun are in reverse from the northern hemisphere, and the Southern Cross replaces Polaris as the lode star of the firmament. July and August are winter months, and a southern exposure is the cold outlook. Mrs. Babbitt and I can attest to the wintry part of it because we went south far enough to encounter sub-freezing temperatures in regions where there is NO heat in the buildings, neither central nor otherwise. To feel really chilled through, let the furnace go out next winter and then sit around the house in your overcoat. We found the wearing of night-clothes (as underwear) during the daytime to be very helpful but the wearing of the overcoat to bed is not recommended. It is scratchy, bumpy, and really unnecessary. There are blankets enough.

The sun in the north is a puzzler, and I'm always getting on the wrong side of the airplane to avoid it. In searching for living quarters imagine trying to find a southern exposure to be cool in the summer. Possibly one reason for Copacabana's popularity is its southern outlook, exposing it to the cool winds from the south and avoiding the heat rays from the north. Within a week after our chilling experience in the south we were in the tropical heat of the Amazon valley where it is perpetual midsummer and there are only two seasons, the wet season and the wetter season. In this climate the social requirement of coat, collar and tie in the dining room is irksome, but you know, we Englishmen must uphold the dignity of the Empire even in the deepest of tropical jungles. We must dress for dinner but, thank whoever

is to be thanked, it does not call for a boiled shirt and tails.

Free speech is restricted here. It is restricted by the dictatorship of the Almighty who created the language barrier. My progress in Portuguese is stumbling and painful. I do the stumbling and the listener has the pain. How can it help but be painful to the listener to hear his beloved language so brutally murdered and, at the same time, try to gather a glimmer of sense from the child-like grunts and heaves issuing from me. Among the many reasons for my delinquency is that no language was taught during the orientation period in Washington, D. C., although it had been announced that it would be taught. There has been no time to study here on the Post because of the press of duties when in Rio, and the frequency with which I am on the road. My best chance for study comes when on the road because, in Rio, so many speak English or French, they won't listen to my Portuguese. On the road I can get into as much hot water as the best. For example, we ordered some hot water, over the telephone in our hotel room. After much palaver it came but there were two eggs in it. Again, on arriving at the Santos Dumont Airport in Rio, I told the taxi man to take us to the American Embassy. Despite protests we wound up at the Ambassador Hotel. Fortunately it's not too long a walk from there to the embassy.

This has been a rambling report of decidedly personal experiences and observations. Sorry to have disappointed if it was a report of political situations or of the status of engineering education you wanted. Politics is boiling here now as the presidential campaign enters its final month. Since, however, I can't read Portuguese well enough to know what it's all about, my political knowledge is gleaned from *Time* magazine. Insofar as the status of engineering education is concerned, I'm learning fast and am accumulating much knowledge. One lesson well learned is to say little and saw wood. It is safe to say, however, that my job is enjoyable, exhilarating, and demanding. I like it and the people I meet in it. I have been able to meet the principal engineering educators of the country, to visit schools, laboratories and libraries, and to see municipal public works with a thoroughness not ordinarily possible. I have seen things at which I marvel, and that could well be emulated in North American practice. Brazilian boldness in reinforced concrete design is excelled nowhere.

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One way to avoid losing your shirt is to keep the sleeves rolled up.  
—*Ensign News*.

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Coming together is beginning. Keeping together is unity. Working together is success.

—*Baptist Observer*.

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Modern: A word used to describe something that has no other merit.  
—Origin Unknown.



## HOMETOWN JUNIOR COLLEGES NOW POSSIBLE

By P. E. ROBERTS, Executive Secretary

Much has been written about the shortage of engineers, the misuse of engineering manpower, and the future education of young men in engineering to keep pace with the rapidly expanding utilization of electronic, atomic engineer designed way of life.

Today's forecasts predict a new peak enrollment in colleges and universities in 1961. Educators are in general agreement that there will be neither the physical requirements nor the faculty to adequately take care of the expected new surge of young people asking for college level education. There are several reasons why those who administer school affairs found that they could not enlarge their systems fast enough to accommodate the known increase. The principal reason is that there is not sufficient tax money to pay for rapid expansion.

Universities face many problems other than the provision of classrooms and faculty. Places to house both married and single students, facilities for movement and storage of automobiles adjacent to the campus, recreational and extra-curricular activities, sanitation and water requirements, and fire and police protection are some of the problems which must be solved all of the time, and these problems become exceedingly complex with a sudden influx of many new people.

A possible answer to these problems would be a network of junior colleges over the state administered by the unit system now in force in each community. That this is feasible has been demonstrated by several progressive communities, namely Joliet, Rockford, LaSalle-Peru, Springfield and others.

There are many advantages to such an expansion of higher educational facilities at the "home town" level; the disadvantages are minor. Among the advantages are (1) the elimination of the transition from home town to college town, (2) the probability that the high number of failures which now exist at the end of the Freshman and Sophomore years will be reduced, (3) the reduction of the first two year classes at colleges and universities, making room for approximately three times the number of Junior, Senior and Graduate students with present physical facilities and small changes in faculties, (4) the allowing of an orderly expansion over a longer period of time of housing and the many attendant problems, (5) the possibility of establishing a technical or mathematical course to train engineering aides to do the work now being done by engineers, thereby reducing some of the misuse of engineering manpower, (6) the greater use of present local educational units with the advantage of the chance to advance from the high school level to the college level offered to the faculties, (7) the elimination of the "waiting period" now present for young men who will serve their turn in the armed forces at about 20 years of age. The local Junior College system would permit finishing the first phase of the higher educational program without the expense of moving the young man

(Continued on page 6)

## Items of Personal Interest

The Illinois State Geological Survey will celebrate its fiftieth anniversary with a two day program on October 11th and 12th. On Tuesday, October 11th, there will be a Banquet in the Illini Union Ballroom on the University of Illinois Campus presided over by Director Vera M. Binks, Department of Registration and Education.

Theodore Morf (N '54) has taken over the desk of the late W. L. Esmond, Illinois Division of Highways. Mr. Morf's title is Engineer of Research and Planning.

J. F. Nolan, (N '48) former Secretary, Central Illinois Chapter, has been named City Engineer of Decatur, Illinois.

Peggy Mills, who was Professor Babbitt's Secretary in 1948 while her husband Jim was in school, presented Jim with a daughter, Sally Ann, on August 9th. This is their second, the first a boy. Jim was Junior Representative on the Board for a couple years. He was field engineer for Portland Cement Association after graduation from the University of Illinois until early this year when he joined Nelsen Concrete Culvert Company.

Raymond Yong, civil engineering graduate of Purdue University and M. I. T., who has been with the Illinois State Highway Department, has joined the engineering staff of Soiltest Incorporated in Chicago.

W. J. (Bill) Putnam (S '22, N '35) and E. W. Lehmann (S '26, N '47) both retired September 1st from the University of Illinois faculty. Each has done much for the Illinois Society and each has many friends in the Society who wish them a long, pleasant, happy rest.

On Saturday, August 20th, William H. Day, Jr., son of William H. Day, (S '37, N '43), Woodstock, Illinois, was joined in marriage to Galey Shappert, daughter of Frederick W. Shappert, Jr., (S '38), of Belvidere. Both Mr. Day and Mr. Shappert are members of Rockford Chapter.

Champaign County Chapter visited Petro Chemical on a field trip on September 1st, finishing the day with a chicken dinner at the Kaskaskia Country Club. Capital Chapter will visit the same plant on Saturday, September 24, going over by bus from Springfield and having lunch at the plant dining room.

The way to achieve happiness is to have a high standard for yourself and a medium for everyone else.

—Marcelene Cox, *Ladies Home Journal*.

Minds, like streams, may be so broad that they are shallow.

—Isenhour for Brick & Tile.



out of his home. (8) The opportunity for the young man to explore and change course without the penalty attached to this sort of thing when done at college level.

The disadvantages are, (1) the added educational problems of local school boards on supplying a faculty with the ability and the desire to teach at both the high school and junior college level, (2) the added financing problems which are answered in part by House Bill 886 passed by the Sixty-ninth General Assembly and signed by Governor Stratton. The Bill, now law, will be discussed below. (3) The elimination of the advantage of living with and studying with other students in similar courses, (4) the delaying of the time the young man is "on his own."

House Bill 886 passed and signed this session of the legislature provides for the payment to unit school districts which organize and maintain junior colleges, of \$100.00 for each resident pupil in attendance each year. The Bill was originally written for the payment of \$200.00, but was amended in order that the estimated amount of payments would fall within the budget. With this amount of help plus the amount of tuition which would be paid by the student at a college or university, unit districts are in the position of beginning the program at once. Most high schools are in use from morning to about 3:00 P. M. for their high school courses. The present facilities could be used with great advantage by the junior college program from 3:30 to 8:00 P. M. as a beginning. Eventually the junior college could be expanded to its own or joint use of new buildings. If such a program is begun in the fall of 1956, then by the time the big surge reaches the college level in 1961, the idea will have taken hold and the administrators will have opportunities to fit the program to local needs.

A network of junior colleges over the state of Illinois will go a long way toward the answer to most higher educational problems for the next ten years. The promotion of such programs by Illinois Society Chapters in their Chapter areas would be of inestimable benefit.

### "PNEUMATIC BRICKS" ARE NEW

"Pneumatic bricks"—a completely new building material and idea—have been invented at the University of Illinois. The "bricks" are triangular plastic pillows. Air at low pressure keeps them firm. They can be built into almost any arch-shaped structure. Because of extremely light weight there seems almost no limit to the size of structure which might be built.

First use may be by the Air Force in small igloo-shaped emergency shelters for downed flyers on life rafts or ashore. Larger domes could cover radar installations or serve as barracks, shops, or hangars.

The inventors foresee great non-military uses. The domes provide entirely new possibilities for homes, schools, stores, business buildings, and factories; could provide low-cost large "greenhouses" covering entire fields enabling farmers to grow several crops a year on

the same acres; could cover drive-in theaters, ball parks, and stadiums; and could even cover entire communities, "weather conditioning" them to a year-around subtropical climate.

The inventors appear to have reached a long-sought goal of architects and engineers: a building structure entirely in tension. Materials in tension—like the skin of a balloon—show much more strength than those in compression and so can be very thin and light. Materials in compression—like the piers of a bridge or walls of a conventional building—must be heavy to be strong.

"Pneumatic bricks" are completely in tension building units. If made of the newest plastics, such as poly-coated mylar, their walls need be only half as thick as a human hair. To keep them firm, pressure within need not exceed 2 pounds.

The "bricks" for commercial use would be about 3 feet on a side and 4 inches through. If one punctured, others in the arch would hold the structure while a simple patch was applied.

Automatic valves between the "bricks" would allow air to pass from one unit to another at more than 2 pounds pressure to quickly inflate the structure, but would shut off at less pressure so that a leaking unit would isolate itself. Prof. Richardson and Maj. McCauley have invented these valves too.

Air space in the "bricks" would provide insulation against cold, while radiant heat from the sun through the material would warm the inside. If desired, the "bricks" could be made of colored or opaque material or filled with smoke to reduce radiation.

The amount of insulation and of heat transmission are among items still to be determined. Ventilation could be through an opening at the top of the dome and from openings at the bottom.

### BUILDING FOR STRENGTH

An elderly woman, watching a tennis game, saw how often the ball hit the net. Exasperated, she declared, "Why don't they take down the net?"

A golfer complained how hard it was to drive the ball over the ditch. A practical-minded friend said, "I don't understand why the golf club doesn't fill up the ditch, to make the game easier."

Some folks cannot comprehend the value of obstacles or opposition. They never realize the satisfaction and exhilaration experienced by those winning against odds.

If the time ever comes when all of our ditches are filled up, all our nets taken down—when competition and opportunity are wiped out, existence will become hopeless, colorless, pointless. Obstacles keep us on our toes.

When carried too far, security defeats itself. It is risky to take all the risk out of life. The discipline of difficulties keeps men and nations strong.

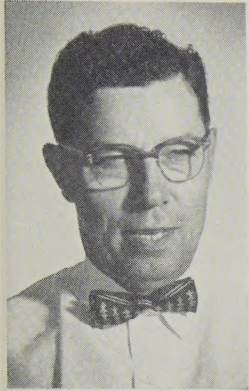
—Adapted from Capitol Life *Contact*.



# Know The Members of Your Board of Direction

*In order that the members of the Illinois Society may learn more about those who are members of the governing body, this feature was begun in July. Here are four more members of the Board.*

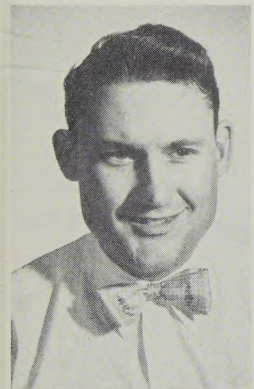
(Photos by C. Dale Greffe, furnished at no cost to the Society)



**JOHN DOLIO**

John Dolio, (N '46), Chicago Chapter Representative, came to the Board after serving his Chapter as Secretary-Treasurer, Vice-President and President. He finished up the term of Harold Sommerschild in 1954 and was elected by his Chapter to continue to represent them in 1955. He received electrical and mechanical training at Chicago Technical College and upon graduation was senior mechanical engineer on the South

District Filtration Plant. During World War II he was Chief Mechanical Engineer on the Bermuda Air Base and Chief of the huge Chicago Dodge Military Engine Plant. At present he is a partner of Shaw, Metz and Dolio. Last summer he flew to Spain, Italy and other European countries on company business. John is a native Illinoisan from Grundy County and will reach the half-century mark on September 30, next.



**JAMES E. SCOTT**

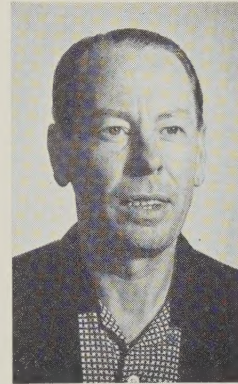
James E. Scott (Jr. '50, EIT '55) is Junior Representative on the Board as of this year. Jim is a field engineer with Portland Cement Association. He earned a B.S. in Civil Engineering at the University of Wisconsin in 1948 and he was an instructor at Wisconsin for a year before joining P.C.A. He lives in Elgin and is a member of the DuKane Chapter. He has a wife and a daughter and his avocation is music, both instru-

mental and vocal. Jim is a native of Wisconsin, born in Neillsville on March 2, 1927.



**KARL A. BRUGGER**

Karl A. Brugger, (N '53), Peoriare Chapter, became a member of the Board at the beginning of the 70th year of the Society. Karl has been Assistant Superintendent of construction for Commonwealth Edison Company since 1937. He received an electrical engineering degree from Marquette University in 1925. He was one of the committee that helped organize Bradley Student Chapter. Karl was born in East Dubuque, Illinois, on June 2, 1902.



**GEORGE DeMENT**

George L. DeMent (S '34, N '46), National Director, being first elected in 1952. He was Chicago Chapter Vice President in 1950 and President in 1951. He served as Chairman of the State Fees and Salaries Committee in '51, '52, '53. George received his civil engineering education at the University of Illinois and began his work for the City of Chicago in the middle 30's. He was administrative engineer in the Department of Subways and Super Highways, then administrative assistant to Virgil Gunlock when he was Commissioner of Public Works. A year ago he was appointed Commissioner of Public Works, City of Chicago, which office he now holds. George's hobby is music, in fact, many years ago he considered a career in radio. He is leader of his church choir and has one daughter who is about ready to enter college. George was born in Chicago on February 8, 1904.

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**BITUMINOUS PAVING**



**VOX SECRETARII**By P. E. ROBERTS, *Executive Secretary**Exam Questions*

In the August ILLINOIS ENGINEER it was stated that the exam questions which are the new material in the fourth edition of the examination question book would be printed in the September Issue. Space available is so limited this month that it is necessary to ask you to wait one more month for these questions. They will be a part of the October ILLINOIS ENGINEER.

*Refresher Course Classes*

As the issue is being finished, there are refresher course classes to be held in Chicago, Ottawa, Danville, DeKalb, Decatur, Springfield, Joliet, LaGrange, Urbana, Bloomington, and Rockford. Most classes began the week of September 6th, therefore, if you are interested in attending a class, you will probably miss only one meeting. The fee for the class is the same as last year, \$15.00.

*Board of Direction Meeting*

The Executive Committee has fixed the Fall meeting of the Board of Direction as October 1st, 10:00 A.M. Daylight Time in the new Y.M.C.A., Decatur, Illinois.

*New N.S.P.E. Brochure on Engineering*

National Society has revised and brought up to date the pamphlet for distribution to high school students entitled "Engineering, A Creative Profession Offering A Career of Opportunity." Also, the companion piece, "Engineering, A Career of Opportunity" for mature students, vocational guidance counsellors, etc. is avail-

able. Apply to National Society of P. E., 1121 Fifteenth Street, N.W., Washington, D.C.

**THE ENGINEER'S PLACE IN THE FUTURE**

by ALFRED P. SLOAN, JR.

Many of our corporations are now headed by engineers in their capacities as chief executives. Such an evolution in the responsibilities of the engineering profession is both logical and desirable. Certainly it is a proper assumption that he who has done so much to create our culture must have the necessary competence to guide and direct it; and it is appropriate that he should have the opportunity to do so in a major way.

But there are other substantial reasons why the engineer should play a large part in the direction of our society. In the first place, we need the engineering point of view. In the organization and direction of large-scale enterprises, economic or social, we need the respect that the engineer has for basic facts. We need his imagination. We need his contact with interpretation and control of physical forces. Such is the type of discipline that it is sure to contribute to a maximum degree of order and sense in our complicated economy, and promote the best and most efficient use of our natural sources, both human and material.

It is logical that the engineer, in exercising his expanded responsibility, should recognize, as indeed he has, that there is more in business than business itself. Thus it is that he has developed greater responsibility in civic affairs, in all areas of public service, and as a humanitarian. His training makes it clear to him that the essential basis of human progress is expanded knowledge.

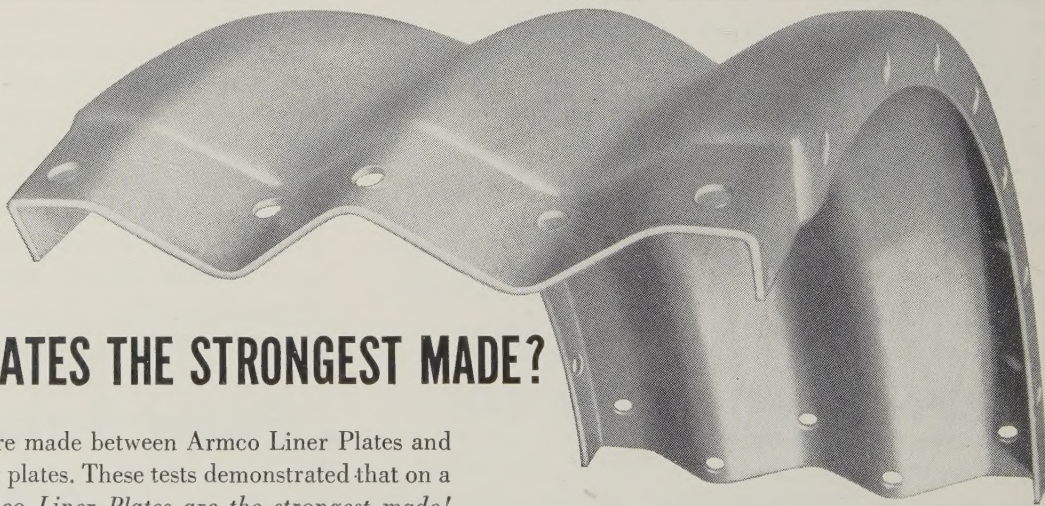
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